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## REMARKS

Rejection under 35 U.S.C. 102

Claim 1 stands rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,932,747 to Russel. Applicants respectfully disagree.

Claim 1

In the Action, the Examiner notes that Russel recites "*individual fibers*" and therefore concludes that Russel shows ends that are "detachable from each other". However, the Applicants respectfully note that any teaching ends that are "detachable from each other" does not teach ends "detached from each other" as recited in claim 1, and respectfully submit that the Examiner has hereby acknowledged that claim 1 is not anticipated by Russel.

Besides, the Applicants respectfully submit that the Examiner has failed to show why one skilled in the art would have been motivated to detach the allegedly detachable input ends of Russel. The Applicants note that Russel relates (see col. 2, lines 44-51) to an apparatus "for homogenizing the intensity profile of an excimer laser" wherein "an excimer laser beam is collected by the input ends of a closely arranged optical fiber bundle array", which allows homogenizing the output of a laser with "reduced losses" (col. 2, lines 58-60).

The Applicants note that one skilled in the art readily understands from the reference that separating the input ends of the fibers instead of packing them would increase the losses instead of reducing them, thus adversely affecting the operation of the apparatus of Russel. The Applicants respectfully submit that actually one skilled in the art is taught away from detaching the individual input ends of Russel from each other, since this would prevent the Apparatus from operating as disclosed in Russel. So even assuming that the ends are "detachable", Russel teaches away from using ends "detached from each other" as claimed. Accordingly, the Applicants respectfully submit that claim 1 is patentable over Russel.

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Rejection under 35 U.S.C. 103

Claims 20, 23 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,303,73 to Harootian; claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Harootian in view of U.S. Pat. No. 6,827,500 to Basavanhally; claim 22 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Harootian in view of U.S. Pat. No. 5,045,100 to Smith; claim 24 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Harootian in view of Smith and further in view of U.S. Pat. No. 6,411,762 to Anthon; claim 25 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Harootian in view of U.S. Pat. No. 6,134,362 to Au-Yeung; claim 27 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Russel in view of U.S. Pat. No. 6,515,257 to Jain; claims 4-5, 9-11, 14, 19 and 28-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Russel in view of Au-Yeung; claims 2 and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Russel in view of Au-Yeung and further in view of Basavanhally; claims 3 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Russel in view of Au-Yeung and further in view of Smith; claims 7 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Russel in view of Au-Yeung and further in view of Smith and Anthon; and claims 6, 8, 15 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Russel in view of Harootian.

Applicants respectfully disagree.

Claim 20

The Examiner opines that Harootian discloses all the features of claim 20 except the use of single mode fibers, and opines that Harootian places no limitations upon the kinds of fibers that may be used with its device (col. 4, lines 8-10 of Harootian recite that there is "*no criticality to the overall dimensions of the [...] individual optical fibers used*"). The rationale of the Examiner is that "one may draw the conclusion that all fibers would be suitable for such a device, including single mode fibers".

However the Applicants note that, contrary to the assertion of the Examiner, the above excerpt actually teaches one skilled in the art to use multimode fibers, since multimode fibers are fibers for which the overall dimensions are not critical, whereas

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dimensions are critical in single mode fibers. Applicants note that accordingly, the above excerpt shows that Harootian actually teaches away from using "*single mode*" fibers as recited in claim 20. At least for the above reason, the Applicants respectfully submit that claim 20 is patentable over Harootian.

Further, Applicants note that Harootian relates to a device for transferring pixel information, wherein it would be highly undesirable to couple the information of neighboring pixels since this would blur the output information of the device. Applicants note that the device of Harootian uses glass multimode fibers, whereby tapering the fibers as taught does not create significant coupling between the fibers, thus avoiding coupling between the pixels. Applicants respectfully submits that, as evidenced by the Hill reference cited by the Examiner, one skilled in the art would have readily understood that using single mode fibers in the device of Harootian would have introduced some coupling between neighboring pixels, thus adversely affecting the operation of the device. Applicants therefore respectfully submit that accordingly, one skilled in the art would also have been taught away from using single mode fiber in the device of Harootian by fear of generating undesirable coupling between the pixels (as taught by Hill), which would have blurred the output image of the device. For the above reason also, the Applicants respectfully submit that claim 20, which recites using "*single mode*" fibers, is patentable over Harootian.

#### Claims 23 and 26

Claims 23 and 26 depend on claim 20. The Applicants respectfully submit that at least in view of their dependency, claims 23 and 26 are patentable over Harootian.

#### Claim 21

The Examiner opines that the use of the teachings of Basavanhally with the device of Harootian would have been obvious, as the hexagonal array described by Basavanhally minimizes unused space within the optical fiber bundle. Applicants respectfully disagree and note for example that figures 2(a) and 2(b) of Harootian show non-hexagonal arrays where no space is lost within the optical fiber bundle. Applicants respectfully submit that the Examiner has failed to show how an hexagonal array could

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minimize the unused space in Harootian, in particular in view of the fact that there seems to be no such unused space in Harootian.

Besides, Applicants note that Harootian relates to an *"anamorphic fused fiber*